In the Specification:

Please amend the specification as follows:

Page 8, line 12 to Page 9, line 4 (Paragraph 22):

In most applications of the present invention, it will be desirable to apply sufficient diamond to the substrate network material to produce a fully coalesced coating, with no holes or other imperfections in the diamond that might compromise the integrity of the underlying network substrate material or impair achieving the properties it is desired to achieve through application of the diamond coating. The present invention contemplates a minimum diamond coating thickness of approximately 2 micrometers to provide a fully coalesced coating. As is understood by those of ordinary skill in the art of diamond deposition, the minimum coating thickness required to achieve an absence of coating defects may vary substantially according to the particulars of the substrate network material, the preparation of said material for coating with diamond, and/or the diamond coating technology selected.

Page 9, lines 6-9 (Paragraph 23):

As will be appreciated by persons of ordinary skill in the art, the three-dimensional shape of finished diamond foam articles according to the present invention may be determined by providing a framework substrate 10 having a desired geometry. As illustrated in FIG. 1A, the framework substrate 10 is an open-celled structure having little or no regular, periodic, or ordered structure. An open-celled structure allows for the flow of fluid (e.g., liquids, gases, fine particulates, etc.) through the structure. Diamond is deposited on the open-celled framework substrate 10 such that the diamond coats all exposed surfaces of the framework substrate 10, as illustrated in FIGS. 1B, 2A, and 2B. Following diamond deposition, the substrate material 10 is still an open-celled structure, as illustrated in FIGS. 1B, allowing for the flow of fluid through the structure.

Page 15, line 10 to Page 16, line 6 (Paragraph 33):

Embodiment 4:

A fourth illustrative process for forming a diamond foam article according to the present invention is illustrated in FIG. 6. A silicon carbide foam material 10 is prepared as in the foregoing embodiments. The foam material 10 is placed in a chamber 50 suitable for diamond deposition using radio-frequency energy known to those skilled in the art. ~~T~~The silicon carbide foam material is supported on an electrically conductive platform 52 that serves to couple radio-frequency energy from RF source 54 to the foam material 10, leaving a 1 centimeter space 56 between the foam surface adjacent to the substrate support platform 52 save for a small area 58 near the periphery of the foam that touches the substrate support platform 52 to provide electrical contact therewith. A counterelectrode 60 is provided adjacent to this platform to assist in igniting and maintaining a plasma 62, as shown in Figure 5. RF source 54 introduces radio frequency energy into the deposition chamber, with due regard for the need to achieve gas isolation and good electrical impedance matching as is known in the art.